

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of
Danvers, Massachusetts)

Financial Statements,
Required Supplementary Information,
and Other Information

For the Year Ended December 31, 2018

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INDEPENDENT AUDITORS' REPORT

To the Honorable Danvers Contributory Retirement Board
Danvers Contributory Retirement System
Town of Danvers, Massachusetts

Additional Offices:

Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

We have audited the accompanying financial statements of the Danvers Contributory Retirement System (the System), a component unit of the Town of Danvers, Massachusetts, as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The System's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies

used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Danvers Contributory Retirement System as of December 31, 2018, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns, listed in the foregoing table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with evidence sufficient to express an opinion or provide any assurance.

Melanson Heath

June 17, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the Danvers Contributory Retirement System (the System), we offer readers this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2018.

A. OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: (1) fund financial statements and (2) notes to financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Fund financial statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. Fund accounting is used to ensure and demonstrate compliance with finance-related legal requirements.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position held in trust restricted for pension benefits. This statement reflects the System's investments at fair value, as well as cash, receivables, and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pensions changed during the year ended December 31, 2018. It reflects contributions by members and participating employers, investment activity, along with deductions for retirement benefits, refunds, transfers, and administrative expenses.

The Notes to Financial Statements provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes this Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability, and the Schedules of Net Pension Liability, Contributions, and Investment Returns.

B. FINANCIAL HIGHLIGHTS

- The System's total net position restricted for pensions was \$107,756,448 at December 31, 2018.
- The System's net position decreased by \$(10,134,205), which is primarily due to investment returns being \$16,824,878 less than expected in calendar year 2018.
- Employer and employee contributions to the plan were \$10,764,784, which represents a \$557,340 increase over the prior year. The employer share of contributions represents 64% of the total contributions made to the System.

- Benefits paid to plan participants increased by \$488,917, or 4%, totaling \$12,900,472. At December 31, 2018, there were 415 retirees and beneficiaries in receipt of pension benefits.
- The System's funded ratio (based on the System's GASB 68 valuation) as of the December 31, 2018 actuarial valuation was 53.92%.

C. FINANCIAL STATEMENT ANALYSIS

The following is a summary of financial statement data for the current and prior fiscal years:

FIDUCIARY NET POSITION

(in thousands)

	<u>2018</u>	<u>2017</u>
Assets		
Cash and receivables	\$ 4,872	\$ 5,576
Investments	<u>103,419</u>	<u>112,447</u>
Total assets	108,291	118,023
Liabilities		
Accounts payable	<u>535</u>	<u>132</u>
Net Position		
Restricted for pensions	\$ <u><u>107,756</u></u>	\$ <u><u>117,891</u></u>

The System's total assets as of December 31, 2018 were \$108,290,902 and were comprised mostly of cash and investments. Total assets decreased \$(9,732,011) or 8% from the prior year primarily due to investment results being approximately \$17m less than anticipated. Total liabilities increased by \$401,194 over the prior year.

CHANGES IN FIDUCIARY NET POSITION

(in thousands)

	<u>2018</u>	<u>2017</u>
Additions		
Contributions	\$ 11,483	\$ 10,502
Investment income, net	<u>(7,946)</u>	<u>17,771</u>
Total additions	3,537	28,273
Deductions		
Benefit payments	12,900	12,412
Other	<u>772</u>	<u>691</u>
Total deductions	<u>13,672</u>	<u>13,103</u>
Changes in net position	(10,135)	15,170
Net Position Restricted for Pensions		
Beginning of year	<u>117,891</u>	<u>102,721</u>
End of year	\$ <u><u>107,756</u></u>	\$ <u><u>117,891</u></u>

The System was 58.6% funded based on its actuarial funding valuation of January 1, 2018 with 9 years remaining in its amortization period for the Danvers Electric Division and 17 years for all other member units.

The amount needed to finance benefits is accumulated through the collection of employers' and employee's contributions, reimbursements from the Commonwealth of Massachusetts for pre-1998 COLA and through earnings on investments. Contributions and net investment loss for calendar year 2018 resulted in a net gain of \$3,537,308. Employer's contributions increased by \$188,311, or 3% in calendar year 2018. The System had net investment loss of \$(7,946,257) versus gain of \$17,771,472 in 2017.

The primary deductions of the System include the payment of pension benefits to participants and beneficiaries, refunds and transfers of member contributions, reimbursement payments in accordance with Massachusetts General Law, Chapter 32, Section 3(8)c, more commonly referred to as 3(8)c reimbursements, and the costs of administering the System. Total deductions for calendar year 2018 were \$13,671,513, which represent an increase of \$567,461, or 4%, over deductions of \$13,104,052 in calendar year 2017. The payment of pension benefits increased by \$488,917 or 4% over the previous year.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Danvers Contributory Retirement System's finances. Questions concerning any of the information provided in this report, or requests for additional financial information, should be addressed to:

Susan Little, Retirement Manager
Danvers Contributory Retirement System
1 Sylvan Street
Danvers, Massachusetts 01923

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Danvers, Massachusetts)

Statement of Fiduciary Net Position

December 31, 2018

Assets

Cash and short-term investments	\$ 4,176,236
Investments:	
Equities	22,741,468
Pooled investments	54,548,760
Hedge funds	6,194,661
Fixed income securities	19,933,664
Accounts receivable	<u>696,113</u>
Total assets	<u>\$ 108,290,902</u>

Liabilities

Accounts payable	<u>\$ 534,454</u>
Total liabilities	534,454

Net Position

Restricted for pensions	<u>107,756,448</u>
Total liabilities and net position	<u>\$ 108,290,902</u>

The accompanying notes are an integral part of these financial statements.

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

(A Component Unit of the Town of Danvers, Massachusetts)

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2018

Additions

Contributions:

Employers	\$ 7,301,589
Plan members	3,463,195
Other systems and Commonwealth of Massachusetts	359,849
Other	<u>358,932</u>
Total contributions	11,483,565

Investment income (loss):

Appreciation in fair value of investments	(7,341,729)
Less: management fees	<u>(604,528)</u>

Net investment (loss)	<u>(7,946,257)</u>
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Total additions	3,537,308
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Deductions

Benefit payments to plan members and beneficiaries	12,900,472
Refunds to plan members	166,333
Transfers to other systems	306,026
Administrative expenses	<u>298,682</u>

Total deductions	<u>13,671,513</u>
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Net (decrease)	(10,134,205)
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Net position restricted for pensions

Beginning of year	<u>117,890,653</u>
End of year	<u><u>\$ 107,756,448</u></u>

The accompanying notes are an integral part of these financial statements.

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

Notes to Financial Statements

1. Description of Plan

Substantially all employees of the Town of Danvers (except teachers and administrators under contract employed by the School Department) and Danvers Housing Authority are members of the Danvers Contributory Retirement System (the System), a cost-sharing, multiple-employer public employee retirement system (PERS). Eligible employees must participate in the System. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages, and benefits paid. The Danvers Contributory Retirement Board does not have the authority to amend benefit provisions.

Membership of the plan consisted of the following at January 1, 2018 (the latest actuarial valuation):

Retirees and beneficiaries receiving benefits	415
Inactive members entitled to a return of employee contributions/Terminated plan members entitled to but not yet receiving benefits	155
Active plan members	<u>500</u>
Total	<u><u>1,070</u></u>
Number of participating employers	2

Participant Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired on or after January 1, 1979 contribute an additional 2% on all gross regular compensation over the rate of \$30,000 per year. The percentages are as follows:

Before January 1, 1975	5%
January 1, 1975 - December 31, 1983	7%
January 1, 1984 - June 30, 1996	8%
July 1, 1996 - present	9%

For those members entering a Massachusetts System on or after April 2, 2012 in Group 1, the contribution rate will be reduced to 6.00% when at least 30 years of creditable service has been attained.

Employer Contributions

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

Participant Retirement Benefits

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest 3-year average annual rate of regular compensation for those hired prior to April 2, 2012 and the highest 5-year average annual rate of regular compensation for those first becoming members of the Massachusetts System on or after that date. However, per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the 5 years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any 2 consecutive years exceeds 100%, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are 4 classes of membership in the retirement system, but one of these classes, Group 3, is made up exclusively of the Massachusetts State Police. The other three classes are as follows:

- Group 1 – General employees, including clerical, administrative, technical, and all other employees not otherwise classified.
- Group 2 – Certain specified hazardous duty positions.
- Group 4 – Police officers, firefighters, and other specified hazardous positions.

A retirement allowance may be received at any age, upon attaining 20 years of service. The plan also provides for retirement at age 55 if the participant was a member prior to January 1, 1978, with no minimum vesting requirements. If the participant was a member on or after January 1, 1978 and a member of Groups 1 or 2, then a retirement allowance may be received if the participant (1) has at least 10 years of creditable service, (2) is age 55, (3) voluntarily left Town employment on or after that date, and (4) left accumulated annuity deductions in the fund. Members of Group 4 have no minimum vesting requirements, however, must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

A participant who became a member on or after April 2, 2012 is eligible for a retirement allowance upon 10 years creditable service and reaching ages 60 or 55 for Groups 1 and 2, respectively. Participants in Group 4 must be at least age 55. Groups 2 and 4 require that participants perform the duties of the Group position for at least 12 months immediately prior to retirement.

Methods of Payment

A member may elect to receive his or her retirement allowance in one of three forms of payment as follows:

- Option A – Total annual allowance, payable in monthly installments, commencing at retirement and terminated at the members death.
- Option B – A reduced annual allowance, payable in monthly installments, commencing at retirement and terminating at the death of the member, provided however, that if the total amount of the annuity portion received by the member is less than the amount of his or her accumulated deductions, including interest, the difference or balance of his accumulated deductions will be paid in a lump sum to the retiree's beneficiary or beneficiaries of choice.
- Option C – A reduced annual allowance, payable in monthly installments, commencing at retirement. At the death of the retired employee, 2/3 of the allowance is payable to the member's designated beneficiary (who may be the spouse, or former spouse who has not remarried, child, parent, sister, or brother of the employee) for the life of the beneficiary. For members who retired on or after January 12, 1988, if the beneficiary pre-deceases the retiree, the benefit payable increases (or "pops up" to Option A) based on the factor used to determine the Option C benefit at retirement. For members who retired prior to January 12, 1988, if the System has accepted Section 288 of Chapter 194 of the Acts of 1998 and the beneficiary pre-deceases the retiree, the benefit payable "pops up" to Option A in the same fashion. The Option C became available to accidental disability retirees on November 7, 1996.

Participant Refunds

Employees who terminate from service are entitled to request a refund of their accumulated total deductions. Members voluntarily withdrawing with at least 10 years of service or involuntarily withdrawing, receive 100% of the regular interest that has accrued on those accumulated total deductions. Members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3.00%.

2. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

The System is a member of the Massachusetts Contributory Retirement Systems and is governed by Chapter 32 of the Massachusetts General Laws. Because of the significance of its operational and financial relationship with the Town, the System is included as a pension trust fund in the Town's basic financial statements. The System is governed by a five-member board. The five members include two appointed by the town, two elected by the members and retirees, and a fifth member chosen by the other four members with the approval of PERAC.

Summary of Significant Accounting Policies

The accounting policies of the System as reflected in the accompanying financial statements for the year ended December 31, 2018 conform to generally accepted accounting principles for public employee retirement systems (PERS). The more significant accounting policies of the System are summarized below:

Basis of Accounting

The System follows accounting policies mandated by the Commonwealth of Massachusetts. The accounting records are maintained on the accrual basis of accounting. Contributions from the Town of Danvers and Danvers Housing Authority employees are recognized as revenue in the period in which employees provide services to the respective member unit.

Investments

Investment Policy

Investments are reported at fair value in accordance with PERAC requirements. System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan.

Rate of Return

For the year ended December 31, 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was (6.94%). The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested throughout the year.

3. Cash and Short-Term Investments

Custodial Credit Risk - Deposits. Custodial credit risk is the risk that in the event of a bank failure, the deposits may not be returned. Massachusetts General Law Chapter 32, Section 23, limits the System's deposits "in a bank or trust company to an amount not exceeding ten percent of the capital and surplus of such bank or trust company." The System does not have a deposit policy for custodial credit risk.

As of December 31, 2018, the System's bank balance of \$4,319,784 was fully collateralized.

4. Investments

A. Credit Risk

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Massachusetts General Law, Chapter 32, Section 23, limits the investment of System funds, to the extent not required for current disbursements, in the PRIT Fund or in securities, other than mortgages or collateral loans, which are legal for the investment of funds in savings banks under the laws of the Commonwealth, provided that no more than the established percentage of assets, is invested in any one security.

Presented below is the actual rating as of year-end for each investment type:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Exempt From Disclosure</u>	<u>Rating as of Year End</u>				
			<u>Aaa</u>	<u>A3</u>	<u>A2</u>	<u>Baa1</u>	<u>Unrated</u>
Debt related securities:							
U.S. Treasury notes	\$ 16,755,837	\$ -	\$ 16,755,837	\$ -	\$ -	\$ -	\$ -
Federal agency securities	991,935	-	991,935	-	-	-	-
Corporate bonds	2,051,198	-	-	1,415,041	444,009	192,148	-
Sinking fund	134,694	-	134,694	-	-	-	-
Bond mutual funds	3,274,153	-	-	-	-	-	3,274,153
Equity securities	22,741,468	22,741,468	-	-	-	-	-
External Investment Pools*	57,469,268	57,469,268	-	-	-	-	-
Total	\$ 103,418,553	\$ 80,210,736	\$ 17,882,466	\$ 1,415,041	\$ 444,009	\$ 192,148	\$ 3,274,153

**Fair value is the same as the value of the pool share. The Pension Reserves Investment Trust was created under Massachusetts general law, chapter 32, section 22, in December 1983. The Pension Reserves Investment Trust is operated under contract with a private investment advisor, approved by the Pension Reserves Investment Management Board. The Pension Reserves Investment Management Board shall choose an investment advisor by requesting proposals from advisors and reviewing such proposals based on criteria adopted under Massachusetts general law, chapter 30B.*

B. Custodial Credit Risk

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government

will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The System does not have policies for custodial credit risk.

C. Concentration of Credit Risk

Massachusetts General Law Chapter 32, Section 23 limits the amount the System may invest in any one issuer or security type, with the exception of the PRIT Fund.

Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments are excluded from concentration of credit disclosure.

As of December 31, 2018, the System did not have any investments subject to concentration of concentration of credit risk as investment classifications exceeding 5% are exempt from disclosure.

D. Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The System does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Information about the sensitivity of the fair values of the System's investments to market interest rate fluctuations is as follows:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Investment Maturities (in Years)</u>				<u>N/A</u>
		<u>Less Than 1</u>	<u>1-5</u>	<u>6-10</u>	<u>More Than 10</u>	
Debt Related Securities:						
U.S. Treasury notes	\$ 16,755,837	\$ 2,820,336	\$ 11,081,742	\$ 2,853,759	\$ -	\$ -
Federal agency securities	991,935	-	-	201,194	790,741	-
Corporate bonds	2,051,198	-	395,788	1,655,410	-	-
Sinking fund	134,694	-	-	-	134,694	-
Bond mutual funds	3,274,153	-	-	-	-	3,274,153
Total	\$ 23,207,817	\$ 2,820,336	\$ 11,477,530	\$ 4,710,363	\$ 925,435	\$ 3,274,153

E. Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment. The System's policy for foreign current risk is that securities of foreign-based issuers that cannot be transacted in US dollars on US exchanges are prohibited.

F. Fair Value

The System categorizes its fair value measurements within the fair value hierarchy established by Governmental Accounting Standards Board Statement No. 72 *Fair Value Measurement and Application* (GASB 72).

The hierarchy is based on the valuation inputs used to measure the fair value of the asset. The hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held in securities are categorized as level 2.
- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative instruments.

The net asset value (NAV) per share is the amount of net assets attributable to each share of capital stock outstanding at the close of the period. Investments measured at the NAV for fair value are not subject to level classification.

The System has the following fair value measurements as of December 31, 2018:

<u>Description</u>	<u>Fair Value Measurements Using:</u>		
	Quoted prices in active markets for identical assets (Level 1)	Significant observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:			
Debt securities			
U.S. Treasury notes	\$ 16,755,837	\$ -	\$ 16,755,837
Federal agency securities	991,935	-	991,935
Corporate bonds	2,051,198	-	2,051,198
Sinking fund	134,694	-	134,694
Bond mutual funds	3,274,153	-	3,274,153
Equity securities			
Equity securities	<u>22,741,468</u>	<u>22,741,468</u>	<u>-</u>
Subtotal	45,949,285	<u>\$ 22,741,468</u>	<u>\$ 23,207,817</u>

(continued)

(continued)

Investments measured at
the net asset value (NAV):

<u>Description</u>	<u>Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (If currently eligible)</u>	<u>Redemption Notice Period</u>
External Investment Pools				
PRIT Core Real Estate Fund	5,336,327	\$ -	Monthly	30 days
PRIT Emerging Markets Fund	10,985,104	-	Monthly	30 days
PRIT Hedge Funds	6,194,661	-	Monthly	30 days
PRIT International Equity Fund	19,348,713	-	Monthly	30 days
PRIT Alternative Investments	2,512,398	3,762,458	Monthly	30 days
Limited Partnerships				
BPG Investments Partnership VIII, LP	104,733	1,600,000	*	*
BPG Investments Partnership IX, LP	560,330	1,000,000	*	*
Palladian Partners VII, LP	1,534,826	1,600,000	*	*
Realty Associates Fund X UTP LP	857,377	1,500,000	*	*
Index Funds				
Rhumline S&P 500 Index Fund	6,427,169	-	Daily	1 day
Rhumline Russell 1000 Growth	<u>3,607,630</u>	-	Daily	1 day
Subtotal	<u>57,469,268</u>			
Total	<u>\$ 103,418,553</u>			

* As standard to limited partnership investments, not fully redeemed until the end of partnership term; distributions based on cash flow of the partnerships.

5. Accounts Receivable

The accounts receivable balances are primarily comprised of investments sold and plan member contributions not received until after December 31, 2018.

6. Accounts Payable

The accounts payable balances are primarily comprised of reimbursements to other systems and investments purchased but not paid until after December 31, 2018.

7. Contingencies

There are various pending claims arising in the ordinary course of operations; however, management believes that the probable liability resulting from such claims and litigation would not materially affect the System's financial position.

8. Net Pension Liability of Participating Employers

The net pension liability was based on an actuarial valuation dated January 1, 2018, and rolled forward to December 31, 2018.

A. Net Pension Liability of Employers

The components of the net pension liability of the participating employers at December 31, 2018 were as follows:

Total pension liability	\$ 199,834,550
Plan fiduciary net position	<u>(107,756,448)</u>
Employers' net pension liability	<u>\$ 92,078,102</u>
Plan fiduciary net position as a percentage of total pension liability	53.92%

B. Actuarial Assumptions

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below:

Valuation Date	1/1/2018
Actuarial cost method	Entry Age Normal
Remaining amortization period	9 years for the Danvers Electric Division and 17 Years for all others
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases:	
Group 1	6.00% - 4.25%, based on service
Group 2	7.00% - 4.75%, based on service
Inflation rate	3.00% per year
Post-retirement cost-of-living adjustment	3.00% of the first \$13,000

Actuarial valuations of the ongoing Systems involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Mortality rates were based on the following:

Pre- and post-retirement and beneficiary mortality:	Based on the RP-2000 Mortality Table (base year 2009) with full generational mortality improvement using Scale BB.
Mortality for disabled members:	Based on the RP-2000 Mortality Table (base year 2012) with full generational mortality improvement using Scale BB.

C. Target Allocations

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the System's targeted asset allocation as of December 31, 2018, are summarized in the following table.

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-term Expected Real Rate of Return</u>
Domestic Equity	30.00%	4.80%
International Equity	25.00%	4.88%
Fixed Income	20.00%	1.07%
Alternatives	22.00%	8.10%
Cash & Cash Equivalents	3.00%	0.00%
Total	<u>100.00%</u>	

D. Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates by Statute. Based on those assumptions, the System's fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

E. Sensitivity of Discount Rate

The following presents the net pension liability of the participating employers calculated using the discount rate of 7.50%, as well as what the participating employers' net pension liability would be if it were calculated using a discount rate that is one percentage-point lower (6.50%) or one percentage-point higher (8.50%) than the current rate:

<u>Year Ended</u>	1% Decrease <u>(6.50%)</u>	Current Discount Rate <u>(7.50%)</u>	1% Discount <u>(8.50%)</u>
December 31, 2018	\$ 114,334,541	\$ 92,078,102	\$ 73,190,805

F. Deferred Outflows/Inflows of Resources

The following schedule reflects the deferred outflows/(inflows) of resources for the System for the year ended December 31, 2018:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	\$ 1,407,727	\$ -
Changes of assumptions	1,755,253	-
Net difference between projected and actual investment earnings on pension plan investments	8,516,843	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>2,417,394</u>	<u>2,417,394</u>
Total	<u>\$ 14,097,217</u>	<u>\$ 2,417,394</u>

The following summarizes changes in deferred outflows/(inflows), excluding employer-specific amounts:

	Measurement Year	Amortization Period	Beginning Balance on Prior Measurement Period Deferrals	Current Measurement Period Additions	Amortization of Amounts Recognized in Current Period Pension Expense	End of Year Balance
<u>Deferred Outflows of Resources:</u>						
Difference between expected and actual experience	2017	5.17	\$ 299,057	\$ -	\$ 71,716	\$ 227,341
	2016	5.30	1,693,598	-	513,212	1,180,386
Changes in Assumptions	2017	5.17	2,077,600	-	498,225	1,579,375
	2016	5.30	252,346	-	76,468	175,878
Net Differences between projected and actual investment earnings on pension plan investments	2018	5.00	-	16,824,878	3,364,976	13,459,902
	2017	5.00	(7,822,381)	-	(1,955,595)	(5,866,786)
	2016	5.00	(1,307,789)	-	(435,928)	(871,861)
	2015	5.00	3,591,174	-	1,795,586	1,795,588
	2014	5.00	1,138,483	-	1,138,483	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	2018	5.17	-	1,467,155	283,782	1,183,373
	2017	5.17	923,813	-	221,538	702,275
	2016	5.30	416,860	-	126,321	290,539
	2015	5.70	383,092	-	141,885	241,207
Total Deferred Outflows of Resources			1,645,853	18,292,033	5,840,669	14,097,217
<u>Deferred (Inflows) of Resources:</u>						
Changes in proportion and differences between employer contributions and proportionate share of contributions	2018	5.17	-	(1,467,155)	(283,782)	(1,183,373)
	2017	5.17	(923,813)	-	(221,538)	(702,275)
	2016	5.30	(416,860)	-	(126,321)	(290,539)
	2015	5.70	(383,092)	-	(141,885)	(241,207)
Total Deferred (Inflows) of Resources			(1,723,765)	(1,467,155)	(773,526)	(2,417,394)
Total Collective Deferred Outflows (Inflows) of Resources			\$ (77,912)	\$ 16,824,878	\$ 5,067,143	\$ 11,679,823

The following schedule reflects the amortization of the balance of deferred outflows/(inflows) of resources:

<u>Fiscal Year*</u>	<u>Total</u>
2020	\$ 3,928,659
2021	2,133,072
2022	2,156,224
2023	3,461,868
	<u>\$ 11,679,823</u>

**Presented by member units' fiscal year to fairly present the fiduciary impact of related deferred outflows/(inflows) in the fiscal year affecting the member unit.*

9. Net Pension Liability of Participating Employers

The Market Value of Assets for the Danvers Retirement System as of December 31, 2018 was \$107,756,448. This includes an excess contribution of \$5,000,000 made by the Electric Division in calendar year 2014. The value of this additional contribution as of December 31, 2018 is \$5,892,506. Since this amount is contributed by the Electric Department solely for their own use and not for any cost-sharing purpose, it is applied only towards the Electric Department's liability in the allocation of results to individual employers. This is consistent with a memorandum of understanding issued by the Municipal Light Board and the Danvers Retirement Board, dated November 13, 2015.

The System's net pension liability (prior to the allocation of the \$5,892,506 discussed above) is allocated to member units (including departments and divisions) based on fiscal year 2019 member contributions. However, because of the treatment of the additional Electric Division contribution, the System has allocated the deferred outflows of resources and deferred inflows of resources (other than proportion and contribution changes) based on the member unit's proportional share of the net pension liability after the allocation of the \$5,892,506.

The additional contribution has been proportionately applied to the entities as follows:

Entity	NPL Allocation Percentages	Allocated Net Pension Liability	Allocation	Adjusted Net Pension Liability	Final Allocation Percentages ⁽¹⁾
Town of Danvers	70.51%	\$ 69,073,541	\$ -	\$ 69,073,541	75.02%
School Department	10.67%	10,453,162	-	10,453,162	11.35%
Electric Division	13.64%	13,363,637	(5,892,506)	7,471,131	8.11%
Water Division	3.26%	3,193,630	-	3,193,630	3.47%
Sewer Division	0.38%	373,992	-	373,992	0.41%
Danvers Housing Authority	1.54%	1,512,646	-	1,512,646	1.64%
Total for All Entities	<u>100.00%</u>	<u>\$ 97,970,608</u>	<u>\$ (5,892,506)</u>	<u>\$ 92,078,102</u>	<u>100.00%</u>

⁽¹⁾Final allocation percentages are used to allocate deferred outflows and inflows other than proportion changes

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

Schedule of Changes in the Net Pension Liability

(Unaudited)

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability					
Service cost	\$ 4,624,846	\$ 3,720,704	\$ 3,569,021	\$ 3,298,870	\$ 3,164,384
Interest on unfunded liability - time value of money	14,385,211	14,147,151	13,435,902	13,431,210	13,007,186
Changes of benefit terms	-	-	930,654	-	-
Differences between expected and actual experience	-	370,773	2,720,022	-	-
Changes of assumptions	-	2,575,825	405,282	-	-
Benefit payments, including refunds of member contributions	<u>(12,706,956)</u>	<u>(12,212,361)</u>	<u>(11,857,960)</u>	<u>(11,189,819)</u>	<u>(10,821,671)</u>
Net change in total pension liability	6,303,101	8,602,092	9,202,921	5,540,261	5,349,899
Total pension liability - beginning	<u>193,531,449</u>	<u>184,929,357</u>	<u>175,726,436</u>	<u>170,186,175</u>	<u>164,836,276</u>
Total pension liability - ending (a)	199,834,550	193,531,449	184,929,357	175,726,436	170,186,175
Plan Fiduciary Net Position					
Contributions - employer	7,301,589	6,760,731	6,317,667	5,853,934	10,686,405
Contributions - member	3,160,074	2,773,534	2,617,135	2,605,540	2,433,972
Net investment income	(8,086,335)	17,643,023	9,510,814	(1,106,853)	2,035,488
Benefit payments, including refunds of member contributions	(12,706,956)	(12,212,361)	(11,857,960)	(11,189,819)	(10,821,671)
Administrative expense	142,460	154,085	152,728	128,873	(188,747)
Other	<u>54,963</u>	<u>50,329</u>	<u>-</u>	<u>-</u>	<u>-</u>
Net change in plan fiduciary net position	(10,134,205)	15,169,341	6,740,384	(3,708,325)	4,145,447
Plan fiduciary net position - beginning	<u>117,890,653</u>	<u>102,721,312</u>	<u>95,980,928</u>	<u>99,689,253</u>	<u>95,543,806</u>
Plan fiduciary net position - ending (b)	<u>107,756,448</u>	<u>117,890,653</u>	<u>102,721,312</u>	<u>95,980,928</u>	<u>99,689,253</u>
Net pension liability (asset) - ending (a-b)	<u>\$ 92,078,102</u>	<u>\$ 75,640,796</u>	<u>\$ 82,208,045</u>	<u>\$ 79,745,508</u>	<u>\$ 70,496,922</u>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

Schedules of Net Pension Liability, Contributions, and Investment Returns

(Unaudited)

Schedule of Net Pension Liability

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 199,834,550	\$ 193,531,449	\$ 184,929,357	\$ 175,726,436	\$ 170,186,175
Plan fiduciary net position	<u>107,756,448</u>	<u>117,890,653</u>	<u>102,721,312</u>	<u>95,980,928</u>	<u>99,689,253</u>
Net pension liability (asset)	<u>\$ 92,078,102</u>	<u>\$ 75,640,796</u>	<u>\$ 82,208,045</u>	<u>\$ 79,745,508</u>	<u>\$ 70,496,922</u>
Plan fiduciary net position as a percentage of the total pension liability	53.92%	60.92%	55.55%	54.62%	58.58%
Covered payroll	\$ 29,176,993	\$ 27,424,233	\$ 26,767,949	\$ 26,834,535	\$ 24,485,565
Participating employer net pension liability (asset) as a percentage of covered payroll	315.58%	275.82%	307.11%	297.17%	287.91%

Schedule of Contributions

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 7,301,589	\$ 6,760,731	\$ 6,259,936	\$ 5,796,238	\$ 5,366,886
Contributions in relation to the actuarially determined contribution	<u>7,301,589</u>	<u>6,760,731</u>	<u>6,259,936</u>	<u>5,796,238</u>	<u>5,366,886</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 29,176,993	\$ 27,424,233	\$ 26,767,949	\$ 26,834,535	\$ 24,485,565
Contributions as a percentage of covered payroll	25.03%	24.65%	23.39%	21.60%	21.92%

Schedule of Investment Returns

Year Ended December 31

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money weighted rate of return, net of investment expense	-6.94%	17.57%	10.05%	5.17%	5.17%

*Schedules are intended to show information for 10 years.
Additional years will be displayed as they become available.*

Independent Auditors' Report

To the Honorable Danvers Contributory Retirement Board
Danvers Contributory Retirement System
Town of Danvers, Massachusetts

Additional Offices:

Nashua, NH
Manchester, NH
Greenfield, MA
Ellsworth, ME

Report on Schedules

We have audited the accompanying schedule of employer allocations of the Danvers Contributory Retirement System as of and for the year ended December 31, 2018. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the accompanying schedule of pension amounts by employer of the Danvers Contributory Retirement System as of and for the year ended December 31, 2018.

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and specified column totals included in the

schedule of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for the Danvers Contributory Retirement System as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Restriction on Use

Our report is intended solely for the information and use of Danvers Contributory Retirement System management, the Retirement Board, System employers and their auditors as of and for the year ended December 31, 2018 and is not intended to be and should not be used by anyone other than these specified parties.

Melanson Heath

June 17, 2019

DANVERS CONTRIBUTORY RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER ALLOCATIONS

<u>Employer</u>	FY 2019 Actual Employer <u>Contributions</u>	<u>Allocation Percentage*</u>
Town of Danvers	\$ 5,147,938	70.51%
School Department	779,057	10.67%
Electric Division	995,970	13.64%
Water Division	238,016	3.26%
Sewer Division	27,873	0.38%
Danvers Housing Authority	<u>112,735</u>	<u>1.54%</u>
Total	\$ <u><u>7,301,589</u></u>	<u><u>100.00%</u></u>

*See Note 9 in the audited financial statements

See actuarial assumptions in the Danvers Contributory Retirement System audited financial statements

DANVERS CONTRIBUTORY RETIREMENT SYSTEM

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

As of and for the year ended December 31, 2018

	Town of <u>Danvers</u>	School <u>Department</u>	Electric <u>Division</u>	Water <u>Division</u>	Sewer <u>Division</u>	Danvers Housing <u>Authority</u>	<u>Total</u>
<u>Net Pension Liability</u>							
Beginning net pension liability	\$ 57,610,336	\$ 8,718,404	\$ 5,074,889	\$ 2,663,624	\$ 311,922	\$ 1,261,621	\$ 75,640,796
Ending net pension liability	\$ 69,073,541	\$ 10,453,162	\$ 7,471,131	\$ 3,193,630	\$ 373,992	\$ 1,512,646	\$ 92,078,102
<u>Deferred Outflows of Resources</u>							
Difference between expected and actual experience	\$ 1,056,024	\$ 159,812	\$ 114,222	\$ 48,825	\$ 5,718	\$ 23,126	\$ 1,407,727
Net difference between projected and actual investment earnings on pension plan investments	6,389,016	966,874	691,049	295,398	34,593	139,913	8,516,843
Changes of assumptions	1,316,725	199,265	142,420	60,879	7,129	28,835	1,755,253
Changes in proportion and differences between employer contributions and proportionate share of contributions	<u>637,247</u>	<u>211,022</u>	<u>1,473,912</u>	<u>76,170</u>	<u>4,232</u>	<u>14,811</u>	<u>2,417,394</u>
Total Deferred Outflows of Resources	\$ <u>9,399,012</u>	\$ <u>1,536,973</u>	\$ <u>2,421,603</u>	\$ <u>481,272</u>	\$ <u>51,672</u>	\$ <u>206,685</u>	\$ <u>14,097,217</u>
<u>Deferred Inflows of Resources</u>							
Changes in proportion and differences between employer contributions and proportionate share of contributions	\$ <u>1,637,540</u>	\$ <u>180,502</u>	\$ <u>370,956</u>	\$ <u>163,161</u>	\$ <u>15,346</u>	\$ <u>49,889</u>	\$ <u>2,417,394</u>
Total Deferred Inflows of Resources	\$ <u>1,637,540</u>	\$ <u>180,502</u>	\$ <u>370,956</u>	\$ <u>163,161</u>	\$ <u>15,346</u>	\$ <u>49,889</u>	\$ <u>2,417,394</u>
<u>Pension Expense</u>							
Proportionate share of pension expense	\$ 8,987,817	\$ 1,360,160	\$ 972,140	\$ 415,554	\$ 48,664	\$ 196,825	\$ 11,981,160
Proportion changes and differences between employer contributions and proportionate share recognized as expense	<u>(287,157)</u>	<u>41,414</u>	<u>259,032</u>	<u>(4,825)</u>	<u>(2,256)</u>	<u>(6,208)</u>	<u>-</u>
Total Pension Expense	\$ <u>8,700,660</u>	\$ <u>1,401,574</u>	\$ <u>1,231,172</u>	\$ <u>410,729</u>	\$ <u>46,408</u>	\$ <u>190,617</u>	\$ <u>11,981,160</u>
<u>Contributions</u>							
Actuarially determined contribution	\$ 5,147,938	\$ 779,057	\$ 995,970	\$ 238,016	\$ 27,873	\$ 112,735	\$ 7,301,589
Contributions made	<u>(5,147,938)</u>	<u>(779,057)</u>	<u>(995,970)</u>	<u>(238,016)</u>	<u>(27,873)</u>	<u>(112,735)</u>	<u>(7,301,589)</u>
Contribution deficiency / (excess)	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>
Contributions as a percentage of covered payroll	28.63%	16.38%	23.85%	17.51%	9.93%	18.06%	25.03%
<u>Deferred Outflows/(Inflows) Recognized in Future Pension Expense</u>							
June 30, 2020	\$ 2,659,977	\$ 487,416	\$ 577,798	\$ 131,436	\$ 13,701	\$ 58,331	\$ 3,928,659
June 30, 2021	1,323,820	267,517	454,137	55,715	5,662	26,221	2,133,072
June 30, 2022	1,437,756	243,116	418,992	29,083	4,777	22,500	2,156,224
June 30, 2023	2,379,304	364,383	551,477	103,698	12,399	50,607	3,461,868
June 30, 2024	<u>(39,385)</u>	<u>(5,961)</u>	<u>48,243</u>	<u>(1,821)</u>	<u>(213)</u>	<u>(863)</u>	<u>-</u>
Total Deferred Outflows / (Inflows) Recognized in Future Pension Expense	\$ <u>7,761,472</u>	\$ <u>1,356,471</u>	\$ <u>2,050,647</u>	\$ <u>318,111</u>	\$ <u>36,326</u>	\$ <u>156,796</u>	\$ <u>11,679,823</u>
<u>Discount Rate Sensitivity</u>							
1% decrease (6.50%)	\$ 85,769,486	\$ 12,979,823	\$ 9,276,998	\$ 3,965,571	\$ 464,391	\$ 1,878,272	\$ 114,334,541
Current discount rate (7.50%)	\$ 69,073,541	\$ 10,453,162	\$ 7,471,131	\$ 3,193,630	\$ 373,992	\$ 1,512,646	\$ 92,078,102
1% increase (8.50)	\$ 54,904,999	\$ 8,308,983	\$ 5,938,633	\$ 2,538,544	\$ 297,278	\$ 1,202,368	\$ 73,190,805
Covered Payroll	\$ 17,979,391	\$ 4,757,573	\$ 4,175,555	\$ 1,359,470	\$ 280,622	\$ 624,382	\$ 29,176,993

See actuarial assumptions in the Town of Danvers, Massachusetts (Contributory Retirement System) audited financial statements.